Stanford

Bruce McCandliss
Professor of Education and, by courtesy, of Psychology
Graduate School of Education

- NIH Biosketch available Online
- Curriculum Vitae available Online

CONTACT INFORMATION
- Administrative Contact
  Kristin Barklund
  Email kbarklund@stanford.edu
  Tel 650-736-9305

Bio

ACADEMIC APPOINTMENTS
- Professor, Graduate School of Education
- Professor (By courtesy), Psychology
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

LINKS
- My Lab Site: https://edneuroinitiative.stanford.edu/

Research & Scholarship

RESEARCH INTERESTS
- Brain and Learning Sciences
- Diversity and Identity
- Psychology
- Research Methods
- Technology and Education

Teaching

COURSES

2019-20
- Educational Neuroscience: EDUC 266 (Win)
- Learning Sciences and Technology Design Research Seminar and Colloquium: EDUC 291 (Win)

2018-19
- Educational Neuroscience: EDUC 266 (Win)
2017-18

• Cognitive Development in Childhood and Adolescence: EDUC 368 (Win)
• Development and Psychological Sciences (DAPS) Faculty Student Seminar: EDUC 465 (Aut, Win, Spr)
• Educational Neuroscience: EDUC 266 (Aut)
• Topics in Cognition and Learning: Technology and Multitasking: EDUC 218 (Spr)

2016-17

• Development and Psychological Sciences (DAPS) Faculty Student Seminar: EDUC 465 (Aut, Win, Spr)
• Educational Neuroscience: EDUC 266 (Win)
• Literacy Development and Instruction: EDUC 258 (Aut)
• Topics in Cognition and Learning: Technology and Multitasking: EDUC 218 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Arianna Yuan

Postdoctoral Faculty Sponsor

Robin Irey, Fang Wang

Master’s Program Advisor

Tal Koren

Doctoral Dissertation Co-Advisor (AC)

Xingyu Li

Doctoral (Program)

Lindsey Hasak, Candice Kim, Trang Nguyen, Ethan Roy, Julian Siebert

Publications

PUBLICATIONS

• Attentional Processes in Children With Attentional Problems or Reading Difficulties as Revealed Using Brain Event-Related Potentials and Their Source Localization. FRONTIERS IN HUMAN NEUROSCIENCE
  Santhana Gopalan, P., Loberg, O., Lohvansuu, K., McCandliss, B., Hamalainen, J., Leppanen, P.
  2020; 14

• Cognitive Predictors of Difficulties in Math and Reading in Pre-Kindergarten Children at High Risk for Learning Disabilities. JOURNAL OF EDUCATIONAL PSYCHOLOGY
  2020; 112 (4): 685–700

• Distinct Representations of Magnitude and Spatial Position within Parietal Cortex during Number-Space Mapping. JOURNAL OF COGNITIVE NEUROSCIENCE
  Kanayet, F. J., Mattarella-Micke, A., Kohler, P. J., Norcia, A. M., McCandliss, B. D., McClelland, J. L.
  2018; 30 (2): 200–218

• Event-related potential differences in children supplemented with long-chain polyunsaturated fatty acids during infancy. Developmental science
  Liao, K., McCandliss, B. D., Carlson, S. E., Colombo, J., Shaddy, D. J., Kerling, E. H., Lepping, R. J., Sittiprapaporn, W., Cheatham, C. L., Gustafson, K. M.
  2016

• Effects of Tutorial Interventions in Mathematics and Attention for Low-Performing Preschool Children. JOURNAL OF RESEARCH ON EDUCATIONAL EFFECTIVENESS
2016; 9 (4): 577-606

• Does Music Training Enhance Literacy Skills? A Meta-Analysis  *FRONTIERS IN PSYCHOLOGY*
  Gordon, R. L., Fehd, H. M., McCandliss, B. D.  
2015; 6

• Hemispheric specialization for visual words is shaped by attention to sublexical units during initial learning.  *Brain and language*
  Yoncheva, Y. N., Wise, J., McCandliss, B.  
2015; 145-146: 23-33

• Hemispheric specialization for visual words is shaped by attention to sublexical units during initial learning  *BRAIN AND LANGUAGE*
  Yoncheva, Y. N., Wise, J., McCandliss, B.  
2015; 145: 23-33

• Neuroimaging correlates of handwriting quality as children learn to read and write  *FRONTIERS IN HUMAN NEUROSCIENCE*
  Gimenez, P., Bugescu, N., Black, J. M., Hancock, R., Pugh, K., Nagamine, M., Kutner, E., Mazaika, P., Hendren, R., McCandliss, B. D., Hoeft, F.  
2014; 8

• The emergence of “groupitizing” in children’s numerical cognition  *Journal of experimental child psychology*
  Starkey, G. S., McCandliss, B. D.  
2014; 126: 120-137

• Mise en place: Setting the stage for thought and action  *Trends in Cognitive Sciences*
  Weisberg, D. S., Hirsh-Pasek, K., Golinkoff, R. M., McCandliss, B. D.  
2014; 18 (6): 276-278

• The cognitive mechanisms of the SNARC effect: an individual differences approach  *PloS one*
  Viarouge, A., Hubbard, E. M., McCandliss, B. D.  
2014; 9 (4): e95756

• Selective attention to phonology dynamically modulates initial encoding of auditory words within the left hemisphere  *NeuroImage*
  Yoncheva, Y., Maurer, U., Zevin, J. D., McCandliss, B. D.  
2014; 97: 262-270

• Orthographic influences on division of labor in learning to read Chinese and English: Insights from computational modeling  *Bilingualism: Language and Cognition*
  Yang, J., Shu, H., McCandliss, B. D., Zevin, J. D.  
2013; 16 (2): 354-366

• Effects of rhyme and spelling patterns on auditory word ERPs depend on selective attention to phonology  *Brain and language*
  Yoncheva, Y. N., Maurer, U., Zevin, J. D., McCandliss, B. D.  
2013; 124 (3): 238-243

• Neural systems predicting long-term outcome in dyslexia  *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
2011; 108 (1): 361-366

• Scientific and Pragmatic Challenges for Bridging Education and Neuroscience  *EDUCATIONAL RESEARCHER*
  Varma, S., McCandliss, B. D., Schwartz, D. L.  
2008; 37 (3): 140-152

• Extent of microstructural white matter injury in postconcussive syndrome correlates with impaired cognitive reaction time: a 3T diffusion tensor imaging study of mild traumatic brain injury  *American Journal of Neuroradiology*
2008; 29 (5): 967-973